

# ENVIRONMENTAL ASSESSMENT

FOR THE

## UPPER LYNCH M'TOE TIMBER SALE

PREPARED BY

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Plains Unit, Northwestern Land Office

Montana Department of Natural Resources and Conservation

June, 2013

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## **MEMORANDUM**

*To: Dave Olsen, Forest Management Supervisor, Plains Unit*

*From: Larry Ballantyne, Plains Unit Resource Program Manager*

*Date: June 6, 2013*

*RE: Upper Lynch MTOE Timber Sale*

### **Primary Objective**

*The primary objective of the Upper Lynch MTOE Timber Sale is to harvest sawlogs from Section 14, T21N, R26W which are heavily encumbered by dwarf mistletoe and root diseases. Volume from trees cut during DNRC chainsaw training will be included in the project. Revenue developed by this project will benefit the Public Buildings (P.B.) Trust and the Forest Improvement program. The timber volume will contribute to the Northwestern Land Office sale program targets for FY 2014. New road construction is not authorized. Maintenance to existing roads used for this project will be completed prior to and following the sale activity.*

### **Secondary Objectives**

*Minimize future losses in merchantable timber volume resulting from mortality due to highly advanced dwarf mistletoe and root diseases present in the mature timber component found on this section.*

*Reduce fire hazard and associated risks of loss to State of Montana, privately owned industrial timberland, and residential property adjacent to this section.*

### **Management Directives**

*In planning and preparing this project, management direction of the State of Montana Habitat Conservation Plan (HCP), Montana State Forest Land Management Plan (SFLMP) and associated Administrative Rules shall followed. All applicable Streamside Management Zone (SMZ) rules and regulations will be met. Montana Best Management Practices (BMP) will be applied in all instances*

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	<b>Upper Lynch M'Toe Timber Sale</b>
<b>Proposed Implementation Date:</b>	<b>September, 2013</b>
<b>Proponent:</b>	<b>Department of Natural Resources and Conservation, Northwestern land Office, Plains Unit</b>
<b>Location:</b>	<b>Section 14 Township 21N, Range 26W</b>
<b>County:</b>	<b>Sanders</b>

### I. TYPE AND PURPOSE OF ACTION

The Department of Natural Resources and Conservation proposes to harvest approximately 250 thousand board feet, 1700 tons, of timber on approximately 86 acres in the Lynch Creek drainage, Section 14, Township 21 North, Range 26 West, approximately 7 air miles north of Plains, Montana (See Attachment 1, Area Maps). This action would produce estimated revenue of \$56,000.00 for Public Buildings (P. B.) Trust Grant and approximately \$7,300.00 in Forest Improvement Fees. Activities proposed would harvest trees infected with mistletoe, insect infested and those with root disease along with the salvage of trees felled during DNRC saw training exercises. No new road construction but may involve the maintenance of an estimated 2 miles of existing road.

Lands involved in this proposed project are held by the State of Montana in trust for the support of specific beneficiary institutions such as the public buildings trust, public schools, state colleges, universities, and other state institutions (Enabling Act of February 22, 1889:1972 Montana Constitution, Article 1 Section11). The Board of Land Commissioners and the Department of Natural Resources and Conservation are required, by law, to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for these beneficiary institutions (Section 77-1-202, MCA). In March 2003, the Montana Department of Natural Resources and Conservation adopted Administrative rules for Forest Management (ARM 36.11.401 through 450). The DNRC would manage lands involved in this project in accordance with the Rules.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project.*

Public involvement has been solicited through local newspaper advertisements (Valley Press, Sanders County Ledger and The Missoulian) plus letters sent to adjacent landowners, a grazing lessee and other known interested parties and organizations. One party responded in favor of the project. No issues or concerns were identified through public scoping.

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

##### **DNRC-HCP – U.S. Fish and Wildlife Service**

In December 2011, the U.S. Fish and Wildlife Service issued DNRC an Incidental Take Permit under Section 10 of the Endangered Species Act. The Permit applies to select forest management activities affecting the habitat of grizzly bear, Canada lynx, and three fish species — bull trout, westslope cutthroat trout, and Columbia redband trout — on project area lands covered under the HCP. DNRC and the USFWS will coordinate monitoring of certain aspects of the conservation commitments to ensure program compliance with the HCP.

## Montana Department of Environmental Quality (DEQ)

DNRC is classified as a major open burner by the Montana Department of Environmental Quality (DEQ), and is issued a permit from the DEQ to conduct burning activities on State lands managed by the DNRC. As a major open burning permit holder, DNRC agrees to comply with all of the limitations and conditions of the permit.

## Montana/Idaho Airshed Group

DNRC is a member of the Montana/Idaho Airshed Group, which regulates prescribed burning, including both slash and broadcast burning, related to forest management activities done by DNRC. As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit in Missoula, MT.

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### 3. ALTERNATIVES CONSIDERED:

**Action:** The Action Alternative is shown under section 1, Type and Purpose of Action. No other alternatives were identified during project scoping or analysis; therefore only forest product removal and sale are analyzed in the EA checklist.

**No Action:** Under the no-Action alternative, any activity would be undertaken. No timber would be harvested. This alternative would not produce revenue for the Public Buildings (P.B.) Trust. No road maintenance would occur and no access would be improved.

<h3>III. IMPACTS ON THE PHYSICAL ENVIRONMENT</h3>
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- |  |
|--|
| <ul style="list-style-type: none"><li>• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i></li><li>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i></li><li>• <i>Enter "NONE" If no impacts are identified or the resource is not present.</i></li></ul> |
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### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.*

The following issue statements were compiled from internal discussions regarding the effects of the proposed timber harvesting:

- *Timber harvesting activities may adversely affect soil resources due to increased compaction, displacement and erosion.*
- *Removal of both coarse and fine woody material off site during timber harvest operations can reduce nutrient pools required for future forest stands and can affect the long-term productivity of the site.*

### Existing Conditions

The *Soil Survey of Sanders and Parts of Lincoln and Flathead Counties, Montana (MT651)* identified four soil types in the project area—83B, 83D, 32E and 22E. None of these soils were considered as a high erosion hazard risk and all are suitable for conventional ground-based timber harvest.

DNRC strives to maintain soil productivity by limiting cumulative soil impacts to 15 percent or less of a harvest area, as noted in the SFLMP (DNRC, 1996). As a recommended goal, if existing detrimental soil effects exceed 15 percent of an area, proposed harvesting should minimize any additional impacts. Harvest proposals on areas with existing soil impacts in excess of 20 percent should avoid any additional impacts and include restoration treatments, as feasible, based on site-specific evaluation and plans.

Past monitoring on DNRC timber sales from 1988 to 2011 has shown an average of 11.3 percent soil impacts across all parent materials. Stratifying the results by soil texture that are similar to the majority of the proposed harvesting shows an average of approximately 14.3 percent of the harvest areas impacted from erosion, displacement or severe compaction on ground-based harvesting operation (DNRC, 2011).

Cumulative effects from past and current forest management in the proposed harvest units are a result of roads, skid trails and landings. Ocular estimate during field reconnaissance indicates that approximately 10 percent of this area shows signs of impacts from erosion, compaction or displacement.

Coarse woody debris in the harvest area was estimated to be less than 10 tons per acre for pieces smaller than 3 inches in diameter.

### **Environmental Effects**

- ***Direct, Indirect, and Cumulative Effects of the No-Action Alternative***

No timber harvesting or associated activities would occur under this alternative. Skid trails from past harvesting would continue to recover from compaction as freeze-thaw cycles continue and vegetation root mass increases. No additional adverse cumulative effects would be expected from the implementation of the No-Action Alternative. Because harvesting would not be implemented, compaction, displacement and erosion rates above natural levels would not be expected. Coarse woody debris levels and nutrient cycling would continue as dictated by natural events.

- ***Direct, Indirect, and Cumulative Effects of the Action Alternative***

The comparison of the landtype map, field reconnaissance notes, and topographic map features with the proposed harvest unit map indicates that the proposed unit would be ground-based skidded. The extent of expected impacts would likely be similar to those reported in the *DNRC SOIL MONITORING REPORT (DNRC, 2011)* on post-1990 sites with similar soil textures, or approximately 14.3 percent of the harvest area for ground-based operations. The project proposes to harvest 86 acres using ground-based yarding method; therefore, DNRC would expect moderate or higher impacts from compaction and displacement on up to 12 acres.

By designing the proposed harvesting operations with soil-moisture restrictions, season of use, and method of harvesting, the risk of unacceptable long-term impacts to soil productivity (soil impacts exceeding 15 percent of the harvest area) from compaction and displacement and nutrient pool losses would be low.

Coarse woody debris would be left on-site in volumes recommended to help maintain soil moisture and forest productivity, generally in the 10 to 15 tons per acre range for habitat types found in the harvest locations (Graham et al. 1994). Because coarse woody debris would be left on site in amounts recommended by scientific literature, and fine debris removal would be maintained as much as practicable, the risk of measureable adverse direct or indirect impacts to nutrient cycling would be low.

Although erosion would potentially result from this alternative, the magnitude, area and duration of erosion, compaction and displacement would remain low and within acceptable limits described in the SFLMP. Existing skid trails would be used to keep the extent of impacts to less than 15 percent of the harvest unit. Therefore the risk of unacceptable adverse direct, indirect and cumulative impacts to physical soil properties would be low.

Cumulative effects would be controlled by:

- 1) limiting the area of adverse soil impacts to less than 15 percent of the harvest units (as recommended by the SFLMP) through implementation of BMPs, and skid trail planning on tractor units,
- 2) limiting operations to dry or frozen conditions, and
- 3) using existing skid trails to limit the extent of surface impacts.

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## **5. WATER QUALITY, QUANTITY AND DISTRIBUTION:**

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.*

A field review of the proposed unit was conducted in April 2013. No streams were observed within approximately 700 feet of the proposed unit. The only surface water found within the proposed unit is a pothole with no scoured inlet source or outlet. Additionally, the identified haul route for this project does not cross any streams except on county roads.

Due to the limited surface water features described above and the intermediate harvest proposed, the risk of measureable adverse direct, indirect or cumulative impacts to surface water would be very low for the action alternative.

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## **6. AIR QUALITY:**

*What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.*

The project is located in Montana State Airshed 2 and is outside any identified impact zones. Some particulate matter would be introduced into the Airshed from the burning of logging slash. Impacts are expected to be minor and temporary with slash burning to be conducted when conditions favor good to excellent smoke dispersion. All burning would be conducted during times of adequate ventilation within the existing rules and regulations.

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## **7. VEGETATION COVER, QUANTITY AND QUALITY:**

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.*

This analysis is designed to disclose the existing condition of the vegetative resource and display the anticipated effects that would result from each alternative of this proposal.

### **General Description of Area**

The proposed Upper Lynch MToe Timber Sale is located approximately 7 air miles north of Plains, Montana. Located in Section 14, Township 21N, Range 26W, the parcel is referred to as the Lynch Creek parcel and includes 640 acres of State Trust Land. Adjacent ownerships are either small private and industrial timber holdings.

### **Analysis Method and Area.**

The Plains Unit typically prepares two to four timber sales per year. Each project is evaluated for its potential effects on lands managed by the DNRC and the surrounding landscape. Methods used in the analysis included review of stand level inventory (SLI) data, field visits, review of scientific literature, aerial photography, and consultation with other professionals. The analysis area for direct and indirect effects to vegetation is S14, T21N, R26W in the Lynch Creek parcel. Cumulative impacts are considered at the scale of the Plains Unit.

### **Existing Condition and Management History**

Section records indicate this parcel of State land was first logged in the mid 1930's. There have been two major sales on this parcel, the last being in 2004. Since the 1930's, there have been numerous small salvage and timber permits sold. The sale area is accessed by County Road 7512 and Bobcat Lane. The sale area is well roaded from previous sales; most are Kelly humped, gated, obliterated or inaccessible. A few of these roads may be reopened but would be closed by gate or earthen berm following harvest activities.

Past and current events have changed the forest conditions on the proposed area from what would have been present historically according to Losensky's "Historical Vegetation of Montana" (1997). The area was historically characterized by frequent, low-intensity wildfires prior to the early 1900's. The majority of the overstory timber on the site is now 125 years old. Scattered throughout the area are some individual over mature relics, mostly Douglas fir, but also a few ponderosa pine and western larch. Harvest treatments in the past have created a fairly open canopy, approximately 40-45%, throughout the majority of the stand with an occasional large opening where a landing area had been located. Lodgepole pine, live and dead, occurs in patches and are infested with mountain pine beetle. The understory is comprised mostly of 4-10 foot grand fir and Douglas fir; it is densely stocked although somewhat patchy.

All stands within the project area are beginning to show increases in fuel loading due to advancing shade tolerant regeneration (Douglas-fir, Grand fir,) which acts as ladder fuel. This type of fuel loading is developing in parts of all stands within the project area. Insect and disease mortality in all stand components is also contributing to dead fuel loading. The primary insect and disease agents in the stands are infestations of Dwarf mistletoe (*Arceuthobium douglasii* & *Arceuthobium laricis*), Fir Engraver beetle (*Scolytus ventralis*), Douglas-fir

beetle (*Dendroctonus pseudotsugae*), mountain pine beetle (*Dendroctonus ponderosae*) and root rot (*Armillaria mellea*). The overstory, intermediate components and the overstocked understory are all being affected at a moderate level now, but increasing due to competition from overstocking and advanced age. There is visual evidence of logging trails, corridors and landings from past management actions on State land, however the parcel is surrounded by private ownership which has been previously harvested and views of past logging are common in the area.

Noxious weeds, mainly knapweed, are present throughout the project area, mostly prevalent along open roads and within stand openings. There is an active grazing lease in the parcel.

### **Direct and Indirect Effects on Activities on Vegetation**

#### **No Action Alternative**

No timber harvest or associated activities would occur under this alternative. Timber types would continue to advance towards climax conditions with shade tolerant Douglas- fir and grand fir continuing to thrive in the understory. These species would become dominant and would replace the ponderosa pine and western larch. Growth and vigor of the trees present in the analysis area would continue to decline as competition for resources increases. Insect, mistletoe and root diseases would continue on a path from endemic to epidemic as infestation/infection progresses. Noxious weeds would continue to exist along the roads and move into the forested areas as natural disturbances provide available seedbeds.

#### **Action Alternative**

The proposed alternative would harvest timber on approximately 86 acres. The harvest would be focused on the removal of trees infected with mistletoe, root disease and poorly formed and multiple topped, along with those felled during DNRC saw training exercises. The proposed harvest would maintain existing cover types, and continue uneven-aged management. Overall composition and quality of the stand should improve as competition for resources is reduced, undesirable, diseased and poorly formed trees area removed. Existing second growth regeneration would be expected to increase vigor and growth as competition from the overstory is reduced. Harvest and site preparation activities would increase crown spacing and slightly decrease the 65% canopy cover in the intermediate and overstory components. Growth and vigor would increase because residual tree spacing would allow increased light to crowns and reduce competition for water. More detailed information for treatment by individual units can be obtained in Attachment III,"Prescriptions".

The selective harvest prescription and the inclusion of a buffer strip along the main roads should minimize the visual impacts (see Attachment III, Prescriptions). The end result will still be denser and contain larger trees than does most of the surrounding ownership. The visual impacts would be minimized by using road screening, skid trail and corridor design with the appropriate logging systems.

Noxious weeds may increase in canopy openings and will be monitored and addressed through an integrated pest management plan including chemical and biological control methods. Roads and skid trail approaches would be seeded and spot treated with chemicals following construction and project completion. Prior to entering the site, off-road logging equipment would be cleaned and inspected through the timber sale contract to avoid seed migration. Roads would be closed following the sale to avoid migration of weed seed into the area. Post harvest, the area would continue to be included in the Plains Unit's integrated weed management program. Biological, mechanical and chemical methods would be used to control noxious weeds.

### **Cumulative Effects**

#### **No Action Alternative**

Under this alternative, stand structure and species composition on State land across the Plains Unit are expected to continue to change towards more shade tolerant species. The No Action Approach would gradually move these stands away from the desired future condition of seral cover types and decreased stocking levels. Fuel loading would be expected to increase and stands would become more susceptible to a stand replacement fire, as well as increased mortality from insects and disease.



### **Action Alternative**

Across the Plains Unit, there would be no significant change toward desired potential vegetation class. Under the Action Alternative, timber harvest would occur on approximately 86 acres and would maintain the existing uneven-aged, mixed conifer stand structure. The action would remove trees infested with mistletoe, affected by root diseased and salvage trees fallen during DNRC saw training exercises. Scarification produced during logging activities would encourage regeneration. The overall health of the stand would improve due to removal of unhealthy trees that are susceptible to insect and disease which would increase the productivity of the stands. The decrease in tree mortality would cause a decreased in fuel loading which would lessen the chance of a stand replacement fire, insect infestation and reduce the advance of root disease. For a more detailed stand level description see Attachment III "Prescriptions" pg. 28.

No old growth stands as defined by Green (1992) are present in the project area; therefore the action alternative would not affect old growth. No sensitive plants listed by the Montana Natural Heritage Program have been identified in the project area. Measures to minimize noxious weeds, insects and disease are included in the project design.

Recommendations to minimize direct, indirect and cumulative impacts have been incorporated in the project design.

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### **8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.*

Project has been reviewed by a DNRC Wildlife biologist. (see Attachment II; Wildlife Memo)

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### **9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.*

Project has been reviewed by a DNRC Wildlife biologist. (see Attachment II; Wildlife Memo)

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### **10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine effects to historical, archaeological or paleontological resources.*

Project has been reviewed and commented on by a DNRC Archeologist: Scoping letters were sent to those Tribes that requested to be notified of DNRC timber sales. No response was returned that identified a specific cultural resource issue. A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or paleontologic resources, proposed timber harvest activities are expected to have *No Effect to Antiquities*. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

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### **11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.*

No significant impacts identified.

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**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.*

No impacts are likely to occur under either alternative.

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**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

West Lynch Timber Sale, 2002

Lynch Creek Blowdown Salvage 3 & 4, 2007.

Lynch Creek 612 Cat Ex 2007

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**IV. IMPACTS ON THE HUMAN POPULATION**

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

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**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

Human health would not be impacted by the proposed timber sale or associated activity. There are no unusual safety considerations associated with the proposed timber sale.

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**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

Timber harvest would provide continuing industrial production in the Plains area.

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**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.*

According to Montana Bureau of Business and Economic Research about 10 jobs are supported for one year for every 1 MMBF that is harvested. For this project, that equates to about 2.5 jobs for one year.

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**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.*

People are currently paying taxes from the woods products industry in this region. Due to the relatively small size of this project, there will be no measurable effects cumulative impact from this proposed action on tax revenues.

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**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services*

Log trucks hauling to the mill would result in temporary increases in traffic on Highway 200, Lynch Creek Roads, and the County Road in the Upper Lynch Creek Drainage. This increase is a normal contributor to the activities of the local community and industrial base and cannot be considered a new or increased source.

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**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

None

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**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.*

The area is hunted frequently. Roads that access the immediate area and are currently closed would remain closed after the project only. Gated roads would not affect the ability of people to recreate on these parcels. Recreational areas and wilderness are not accessed through this tract.

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**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.*

There would be no measurable direct, indirect or cumulative impacts related to population and housing due to the relatively small size of the timber sale, and the fact that people are already employed in this occupation in the region

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**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

No impacts related to social structures and mores would be expected under either alternative.

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**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

No impacts related to cultural uniqueness and diversity would be expected under either alternative.

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**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.*

Project would net an estimated \$56,000.00 to the Public Building (P.B.) Trust and an additional \$7,300.00 for forest improvement.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> David Olsen	<b>Date:</b> 6/25/2013
	<b>Title:</b> Forest Management Supervisor	

## V. FINDING

### 25. ALTERNATIVE SELECTED:

The Action Alternative is selected for implementation.

### 26. SIGNIFICANCE OF POTENTIAL IMPACTS:

No significant impacts have been identified as a result of implementing the Action Alternative.

### 27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐

EIS

☐

More Detailed EA

☒

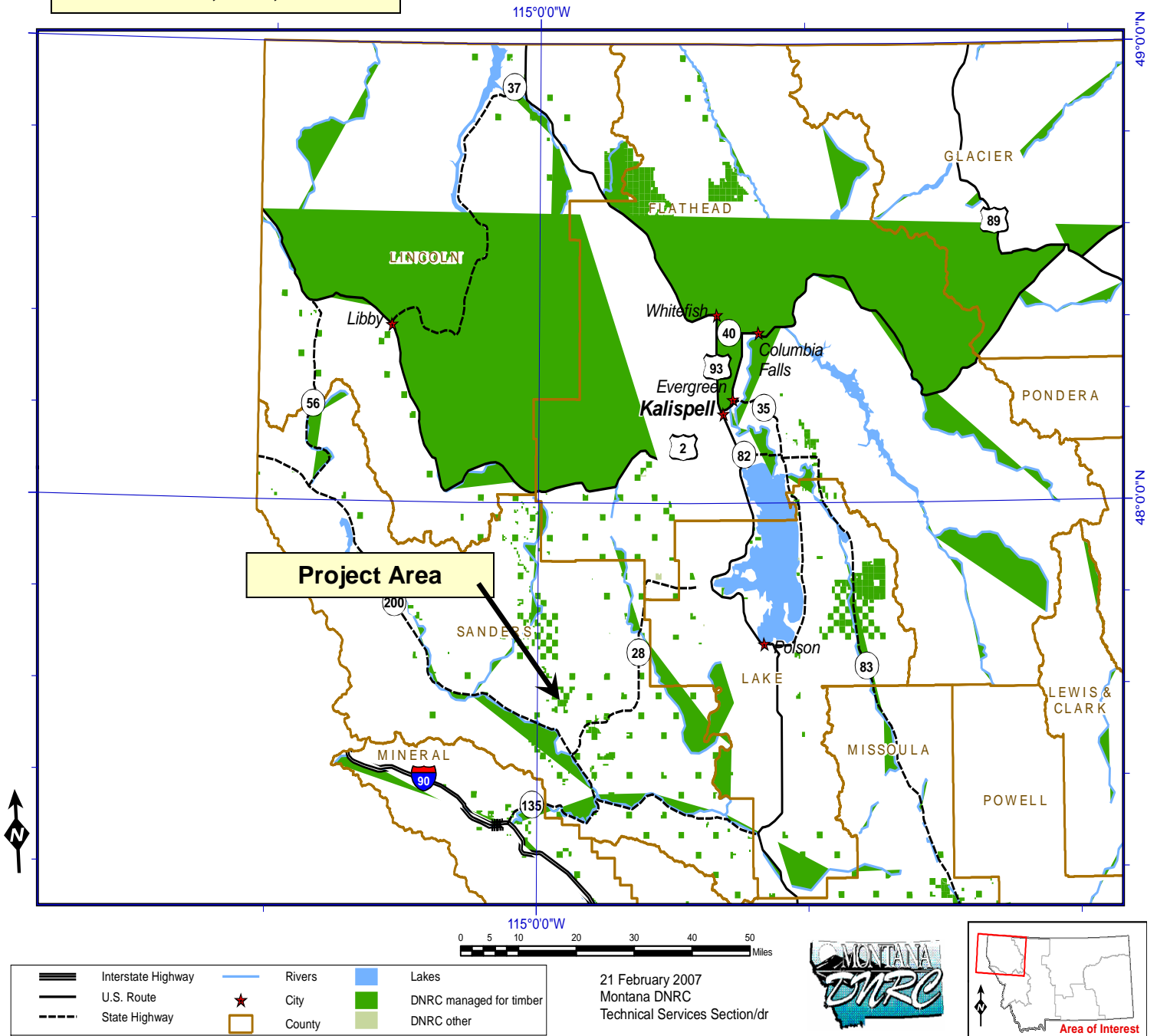
No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Larry Ballantyne
	<b>Title:</b> Plains Unit Manager
<b>Signature:</b>	<i>L. Ballantyne</i>
	<b>Date:</b> 6.26.2013

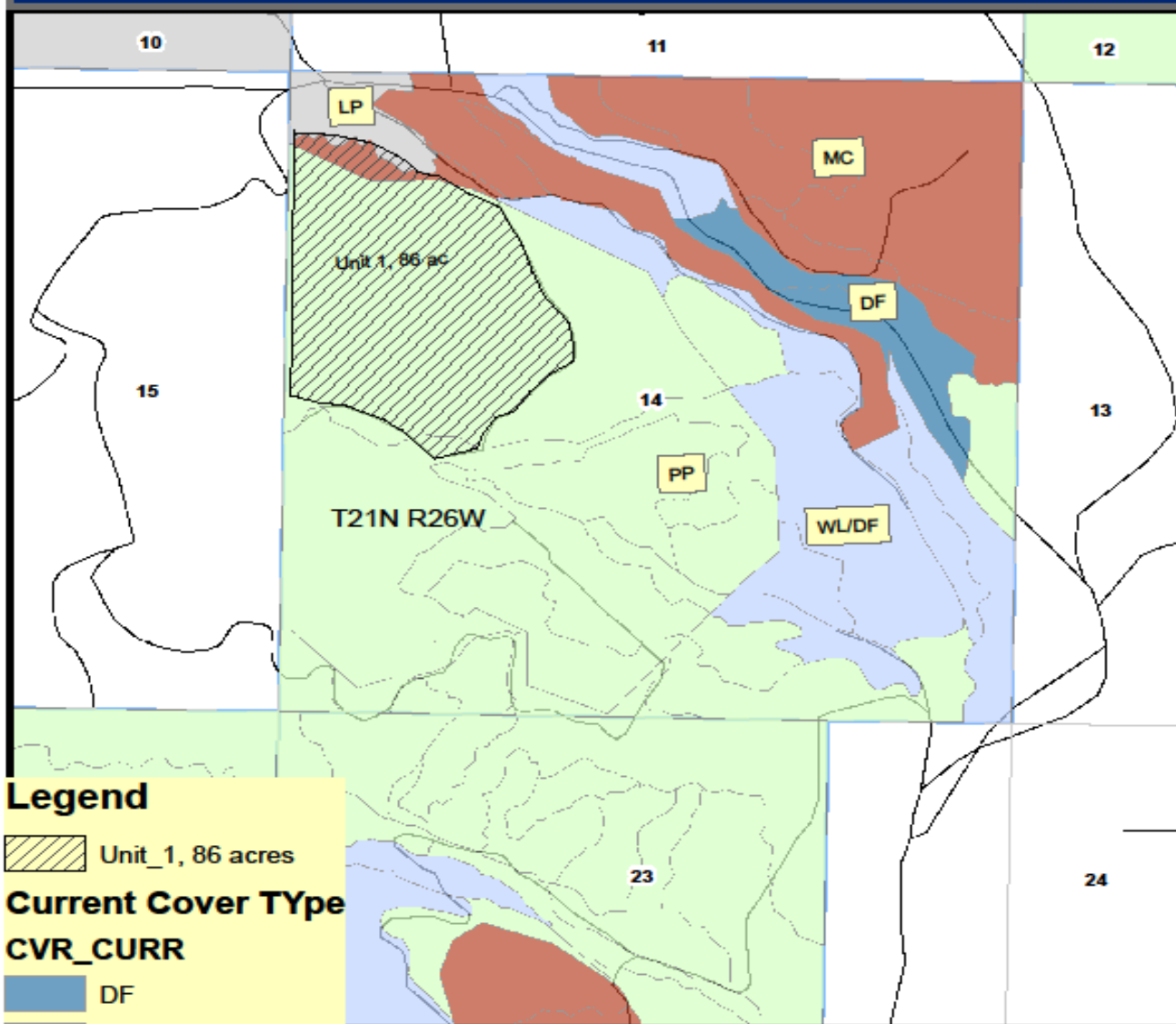
# **Attachment I**

## **Maps**

**Upper Lynch MToe Timber  
Sale  
Vicinity Map  
Attachment A  
Section 14, T21N, R26W**



# Upper Lynch Mtoe TS, Current Conditions S14, T21N, R26W



## Legend

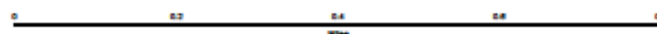
Unit\_1, 86 acres

## Current Cover Type

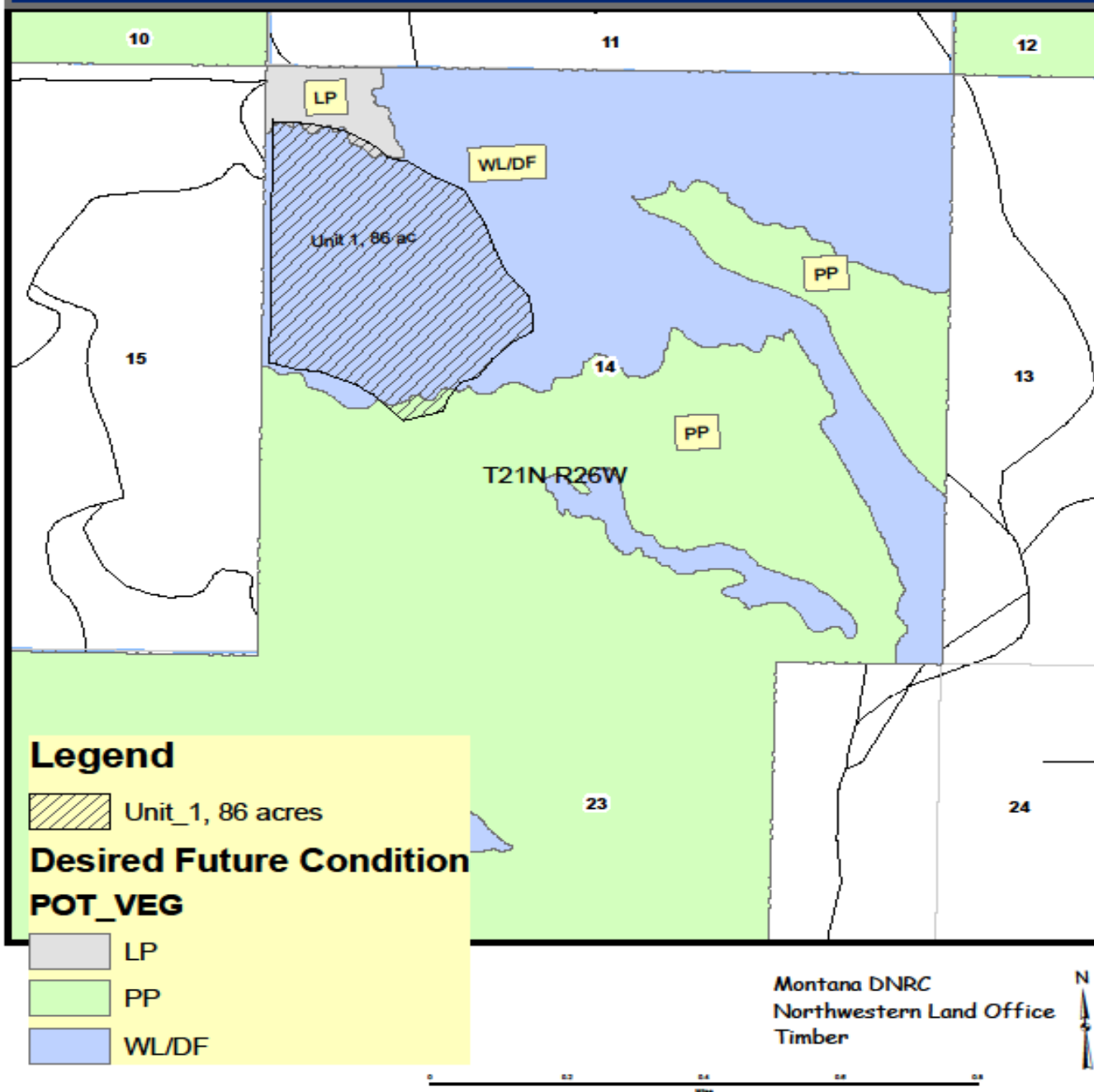
### CVR\_CURR

- DF
- LP
- MC
- PP
- WL/DF

Montana DNRC  
Northwestern Land Office  
Timber

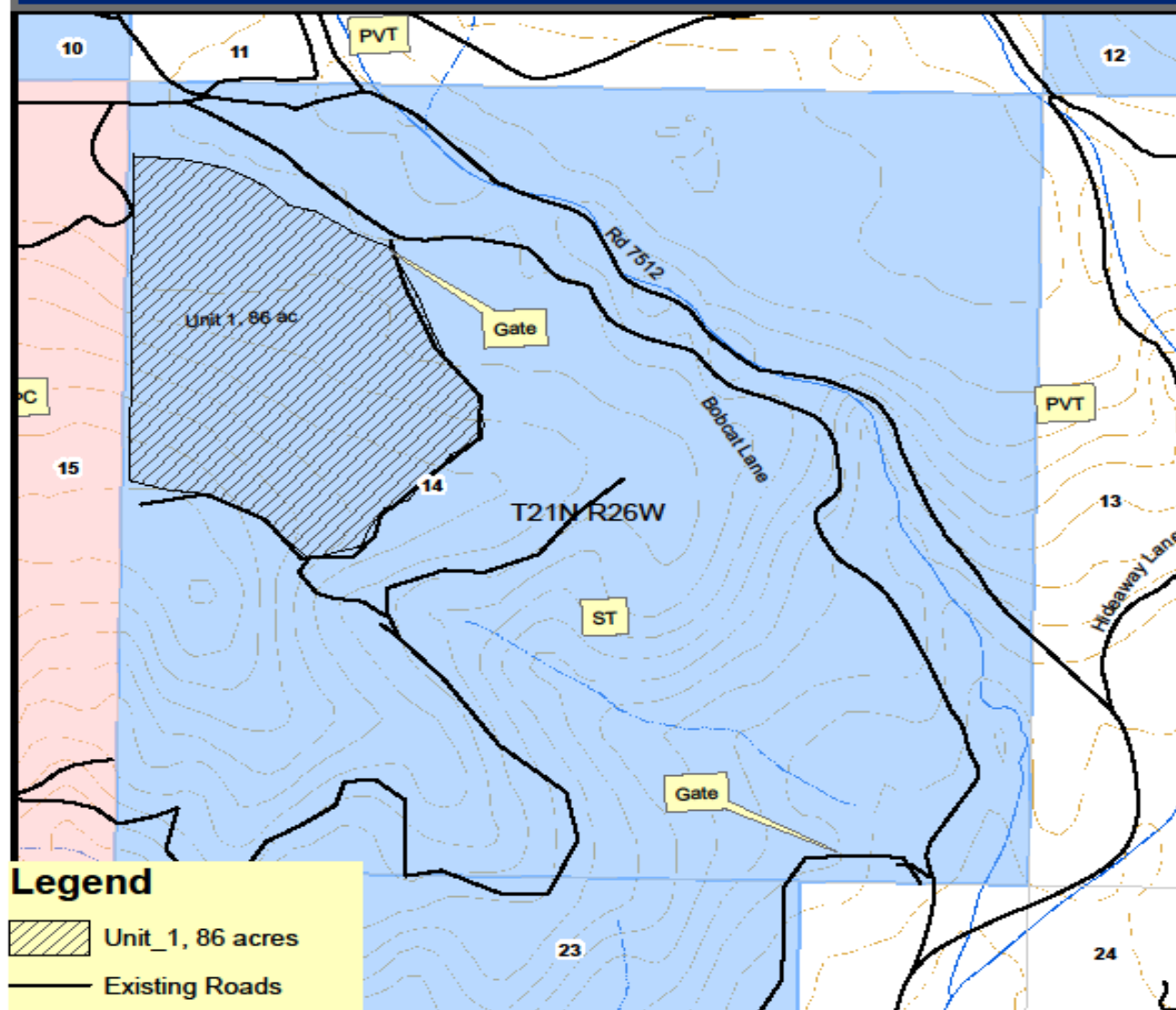


# Upper Lynch Mtoe TS, Desired Future Condition S14, T21N, R26W





# Proposed Upper Lynch MToe Timber Sale S14, T21N, R26W



## Legend

Unit\_1, 86 acres

Existing Roads

## Ownership - General Ownership

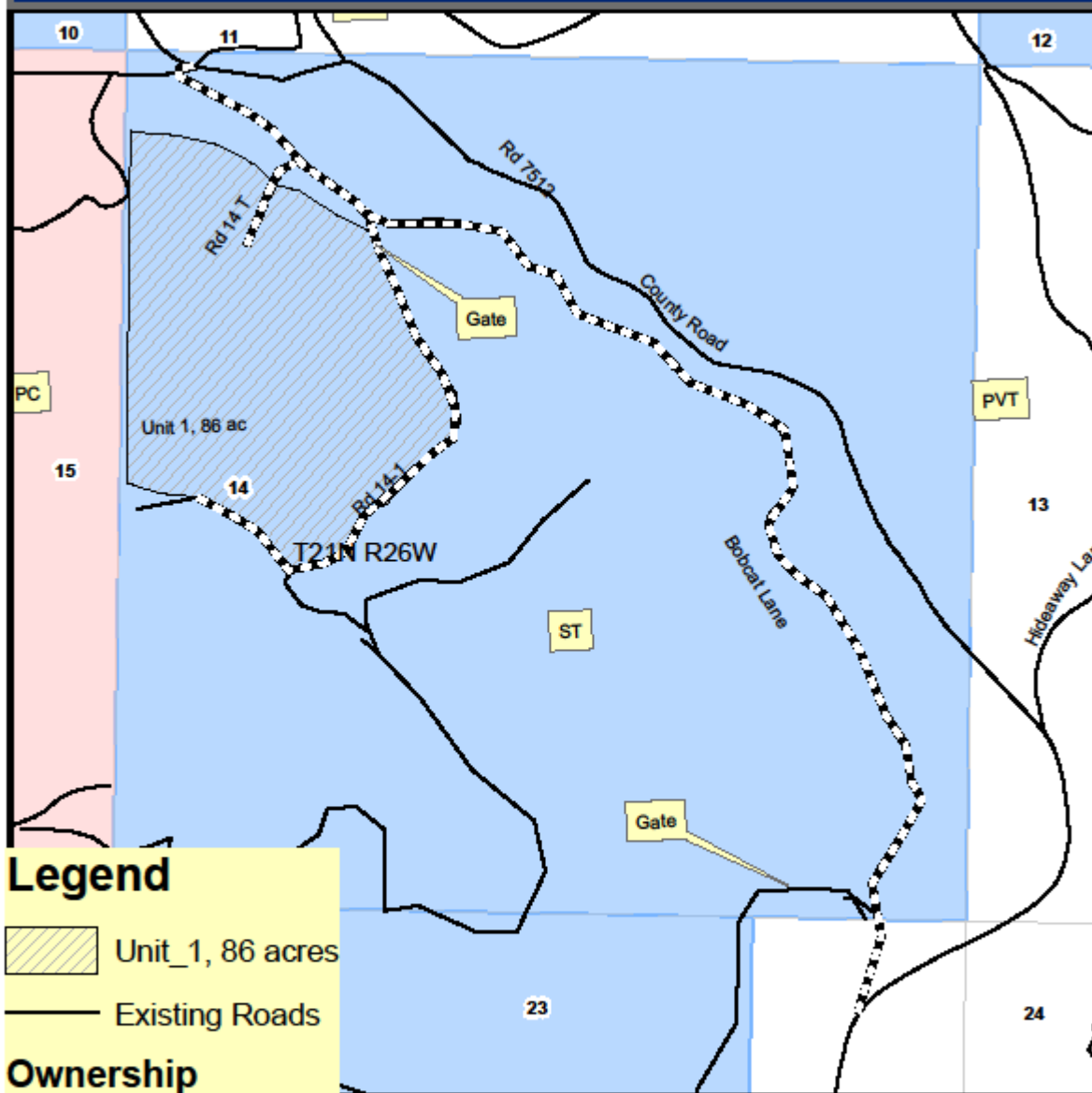
MT DNRC

Plum Creek

Montana DNRC  
Northwestern Land Office  
Timber



# Upper Lynch MToe TS Haul Route S14, T21N, R26W



## Legend

Unit\_1, 86 acres

Existing Roads

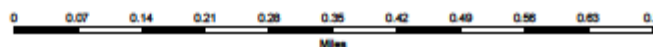
## Ownership

MT DNRC

Plum Creek

Haul Route

Montana DNRC  
Northwestern Land Office  
Timber



## **Attachment II**

### **Wildlife Analysis**

## WILDLIFE ANALYSIS

### INTRODUCTION

I reviewed the Upper Lynch MToe Timber Sale proposed for approximately 86 acres in Section 14, T21N, R26W. The proposed harvest would focus primarily on removing trees affected by mistletoe and root disease as well as salvaging trees felled during DNRC saw training exercises. The proposed harvest would occur for approximately 5 months during a 1-year contract. No new road construction would occur. The following analysis summarizes the anticipated effects of the proposed activities on wildlife. The following issue statements were developed from concerns raised by DNRC specialists and comments received during scoping, and will be addressed in the following analysis:

- **Mature forest cover and connectivity.** The proposed activities could decrease mature forested cover, which could reduce habitat connectivity and suitability for wildlife species associated with mature forest.
- **Pileated woodpeckers.** The proposed activities could reduce tree density and alter the structure of mature forest stands, which could reduce habitat suitability for pileated woodpeckers.

### ANALYSIS AREAS

#### *Direct and Indirect Effects*

The direct and indirect effects of the proposed activities on all species/issues were analyzed within the 641-acre DNRC-managed project area (*FIGURE W-1 – ANALYSIS AREAS*).

#### *Cumulative Effects*

The cumulative effects of the proposed activities on all species/issues were analyzed at a broad surrounding landscape scale composed of a 5,155-acre portion of the Clark Fork River – Lynch Creek Subwatershed (*FIGURE W-1 – ANALYSIS AREAS*). Detailed descriptions of the cumulative effects analysis area (CEAA) are located in the **Existing Condition** section for each issue or wildlife species evaluated.

### ANALYSIS METHODS

Analysis methods are based on DNRC State Forest Land Management Rules, which are designed to promote biodiversity. The primary basis for this analysis included information obtained by: field visits, scientific literature consultation, Montana Natural Heritage Program (MNHP) data queries, DNRC Stand Level Inventory (SLI) data analysis, and aerial photograph analysis. The coarse-filter wildlife analysis section includes analyses of the direct, indirect and cumulative effects of the proposed alternatives on old growth forest, connectivity of mature forest habitats, and snags and coarse woody debris. In the fine-filter analysis, individual species of concern are evaluated. These species include wildlife species federally listed under the Endangered Species Act, species listed as sensitive by DNRC, and species managed as big game by DFWP. Cumulative effects analyses account for known past and current activities, as well as planned future agency actions. The DNRC West Lynch Timber Sale occurred in the project area in 2002 and the affect of the harvest has been accounted for in SLI data. Timber harvest on private lands has been accounted for in aerial photograph analysis.

### RELEVANT AGREEMENTS, LAWS, PLANS, RULES, AND REGULATIONS

Various policy and procedural documents provide the foundation for management criteria pertaining to wildlife and their habitat on state lands. The documents most pertinent to this project include: *DNRC Forest Management Rules*, *DNRC Forested Trust Lands Final Environmental Impact Statement and Habitat Conservation Plan (USFWS and DNRC 2010)*, the *Endangered Species Act*, the *Migratory Bird Treaty Act*, and the *Bald and Golden Eagle Protection Act*.

## COARSE-FILTER ANALYSIS

**TABLE W-1 –COARSE-FILTER.** Analysis of the anticipated effects for coarse-filter resource topics on the DNRC Upper Lynch MToe Timber Sale.

COARSE-FILTER RESOURCE TOPIC	COARSE-FILTER ANALYSIS
Old Growth Forest	Old-growth forest does not occur in the project area, thus no direct, indirect or cumulative effects would be anticipated.
Connectivity of Mature Forest Habitat	<b>Detailed Analysis Provided Below</b> – The proposed activities would reduce canopy cover from 40-50% to 30-40% in 69 acres of mature forested habitat.
Snags and Coarse Woody Debris	Snags and coarse woody debris are not anticipated to be affected by the proposed activities. No changes to open or restricted road density would occur, thus no changes to access for firewood cutting would occur. Snags would be retained, unless they pose a significant safety hazard. Thus, negligible adverse direct, indirect and cumulative effects on species that depend on these resources would be anticipated.

### MATURE FORESTED HABITATS AND CONNECTIVITY

**Issue:** *The proposed activities could decrease mature forested cover, which could reduce habitat connectivity and habitat suitability for wildlife species associated with mature forest.*

#### Introduction

Mature forests characterized by large-diameter trees and dense canopy cover provide many wildlife species with food, shelter, breeding sites, and travel corridors. Historically, the spatial configuration of mature forested habitats in the western United States was shaped by natural disturbance events, primarily wildfire, blowdown, and pest outbreaks. Natural disturbance events resulted in a mosaic-like spatial configuration of forest patches varying in age, species composition and development. Spatial configuration, including patch size and connectivity of forested habitats, is important for many wildlife species. Patch size may affect the distribution of wildlife species that are attracted to, or avoid forest edges. Additionally, connectivity of mature forested habitats may facilitate movements of wildlife species that avoid openings in canopy cover, or inhibit movements of species that are attracted to openings in canopy cover. Timber harvest, like wildfire and blowdown, is a disturbance event that often creates open patches of young, early-successional habitats. Consequently, timber harvest may negatively affect wildlife species dependent on mature forests by reducing the amount and connectivity of these habitats.

#### Analysis Areas

The analysis area for direct and indirect effects is the 641-acre project area (**FIGURE W-1 –ANALYSIS AREAS**). The analysis area for cumulative effects is the 5,155-acre CEAA. The CEAA is defined by geographic features and represents an area large enough to support a diversity of species that use mature forested habitats and/or require connected forested habitats.

#### Analysis Methods

Analysis methods for mature forested habitats and landscape connectivity include field evaluations and Geographical Information System (GIS) analysis of aerial-photographs, DNRC stand level inventory data (SLI), and U.S. Forest Service (USFS) canopy cover data (VMap 9.1.1). Mature forested habitat is defined here and in the remainder of the document as forest stands with  $\geq 40\%$  canopy cover comprised of trees that are on average  $>9$  inches dbh. Forested stands containing trees of at least this size and density were considered adequate for providing minimal conditions necessary to facilitate movements of many wildlife species that benefit from well-connected mature forest conditions across the landscape. Factors considered in the analysis include: 1) the degree of timber harvesting, 2) availability and patch size of mature forested habitat, 3) open and restricted road density, and 4) the availability of potential travel corridors.

## **Existing Conditions**

### ***Mature Forested Habitats and Connectivity***

The project area currently contains 459 acres of mature stands composed primarily of ponderosa pine and Douglas-fir stands (71.6% of project area). The remaining habitat is composed primarily of stands with <40% canopy cover. The mature forested habitat is one large 459-acre patch that is that likely facilitates travel of wildlife species that prefer mature forested habitat. Lynch Creek runs through the east side of the project area and may facilitate wildlife movements between the project area and adjacent stands of mature forested habitat. Open road density in the project area is high (5.1 miles/square mile) and total road density is high (8.3 miles/square mile).

The CEAA contains 2,854 acres (55.4% of analysis area) of mature stands. The majority of the remaining acres in the project area consist of stands with <40% mature canopy cover due to the history of timber harvest on private lands. Across, the CEAA, average patch size is 357 acres and landscape connectivity is high, potentially facilitating wildlife travel. Riparian areas associated with Lynch Creek, Cedar Creek, and other small unnamed creeks likely provide wildlife travel corridors. The network of open roads has reduced some landscape connectivity. Open road density in the CEAA is moderate (3.0 miles/square mile) and total road density is high (5.3 miles/square mile).

## **Environmental Effects**

### ***Direct and Indirect Effects of the No-Action Alternative on Mature Forested Habitats and Connectivity***

None of the proposed forest management activities would occur. Forests would continue to age and dense stands of shade-tolerant trees would continue to develop. Patch size and the availability of mature forested habitat would likely increase over time, increasing connectivity. Thus, since: 1) no appreciable change in the abundance, patch size, or suitability of mature forested habitat would occur, 2) no changes in open or restricted road density would occur, and 3) no changes in the availability of travel corridors would occur; no direct or indirect effects to mature forested habitat abundance, suitability, or connectivity would be anticipated as a result of the No-Action Alternative.

### ***Direct and Indirect Effects of the Action Alternative on Mature Forested Habitats and Connectivity***

The proposed activities would occur in 85 (18.5%) of the 459 acres of mature stands available in the project area. The proposed harvest would reduce mature canopy cover to 30-40% in 69 acres of mature forested habitat and average patch size would decrease from 459 acres to 390 acres. No additional roads are proposed for construction. Riparian habitat would not be affected. Overall, connectivity of upland mature forest would not be affected. Thus, since: 1) the abundance of mature forested habitat would decrease by 69 acres (15.0% of existing mature forest); 2) average patch size of mature forested habitat would decrease by 69 acres; 3) no additional roads are proposed for construction; 4) riparian habitat would not be harvested; and 5) overall connectivity of mature forested habitat would be unaffected; minor direct or indirect effects to mature forested habitat abundance, suitability, or connectivity would be anticipated as a result of the Action Alternative.

### ***Cumulative Effects of the No-Action Alternative on Mature Forested Habitats and Connectivity***

None of the proposed forest management activities would occur. Forests in the project area would continue to age, and dense stands of shade-tolerant trees would continue to develop. Connectivity would not be affected under this alternative. Other proposed or ongoing activities within the CEAA could affect the abundance, suitability, and connectivity of mature forested habitats. Thus, since: 1) no appreciable change in the abundance, patch size, or suitability of mature forested habitat would occur associated with this alternative, 2) no changes in open or restricted road density would occur, and 3) no changes in the availability of travel corridors would occur; no additional cumulative effects to mature forested habitat abundance, suitability or connectivity would be anticipated as a result of the No-Action Alternative.

### **Cumulative Effects of the Action Alternative on Mature Forested Habitats and Connectivity**

The proposed activities would affect 85 acres of the 2,854 acres (3.0%) of mature forested habitat available in the CEAA. The proposed harvest would reduce mature canopy cover to 30-40% in 69 acres and average patch size would decrease from 357 acres to 348 acres. Reductions in the availability of suitable mature forested habitat would be additive to harvest activities in the CEAA (see **ANALYSIS METHODS** section of the Introduction). No roads are proposed for construction. Connectivity of mature forest within the CEAA would not be affected as mature forested habitat would not become disconnected post-harvest and travel would remain possible throughout the CEAA. Thus, since: 1) the abundance of mature forested habitat would decrease by 69 acres (2.4% of existing mature forest); 2) average patch size of mature forest would decrease by 9 acres; 3) no additional roads are proposed for construction; 4) riparian habitat would not be harvested; and 5) overall connectivity of mature forested habitat would not be affected; minor adverse cumulative effects to mature forested habitat abundance, suitability, or connectivity would be anticipated as a result of the Action Alternative.

### **FINE-FILTER WILDLIFE ANALYSIS**

**TABLE W-2 –FINE-FILTER.** Analysis of the anticipated effects for fine-filter species on the DNRC Upper Lynch MToe Timber Sale.

SPECIES/HABITAT	FINE FILTER ANALYSIS
THREATENED & ENDANGERED SPECIES	
Canada lynx ( <i>Felis lynx</i> )  Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zones	The proposed activities would affect 80 acres of suitable lynx habitat. These acres are considered lynx other suitable habitat, which is defined as habitat that has the potential to provide connectivity and lower quality foraging habitat, but does not contain the necessary attributes to be classified as winter or summer foraging habitat classes. The proposed activities would remove 5-10% of the overstory canopy cover, but regenerating conifers would be protected. Post-harvest these acres of lynx habitat would retain adequate understory and overstory canopy cover to remain classified as lynx other suitable habitat. Additionally, coarse woody debris would be retained in accordance with DNRC Forest Management Rules ( <i>ARM 36.11.414</i> ) and retention of downed logs $\geq 15$ inch diameter would be emphasized. Thus, considering the proposed activities would not affect the availability of suitable lynx habitat types and that the proposed harvest would occur for a short duration; negligible direct, indirect, or cumulative effects to Canada lynx would be anticipated.
Grizzly bear ( <i>Ursus arctos</i> )  Habitat: Recovery areas, security from human activity	The project area is located 4 miles outside of grizzly bear recovery zone and non-recovery occupied habitat associated with the Cabinet-Yaak Ecosystem ( <i>USFWS 1993, Wittinger 2002</i> ) and no recent sightings of grizzly bears have occurred in the area ( <i>Kasworm et al. 2011</i> ). Thus, negligible adverse direct, indirect, or cumulative effects to grizzly bears would be anticipated.
SENSITIVE SPECIES	
Bald eagles ( <i>Haliaeetus leucocephalus</i> )  Habitat: Late-successional forest less than 1 mile from open water	The project area is located within 1 mile of Lynch Creek. However, bald eagles have not been documented nesting on Lynch Creek and riparian habitat would not be affected. Thus, negligible direct, indirect, or cumulative effects to bald eagles would be anticipated.
Black-backed woodpeckers ( <i>Picoides arcticus</i> )  Habitat: Mature to old burned or beetle-infested forest	No recently ( $<5$ years) burned areas occur within the project area. Thus, no direct, indirect, or cumulative effects to black-backed woodpeckers would be anticipated.

<p>Coeur d'Alene salamanders (<i>Plethodon idahoensis</i>)</p> <p>Habitat: Waterfall spray zones, talus near cascading streams</p>	<p>No moist talus or streamside talus habitat occurs in the project area. Thus, no direct, indirect, or cumulative effects to Coeur d'Alene salamanders would be expected to occur as a result of either alternative.</p>
<p>Columbian sharp-tailed grouse (<i>Tympanuchus Phasianellus columbianus</i>)</p> <p>Habitat: Grassland, shrubland, riparian, agriculture</p>	<p>No grassland habitat occurs in the vicinity of the proposed harvest units. Thus, no direct, indirect, or cumulative effects to Columbian sharp-tailed grouse would be anticipated.</p>
<p>Common loons (<i>Gavia immer</i>)</p> <p>Habitat: Cold mountain lakes, nest in emergent vegetation</p>	<p>No suitable lake habitat occurs within 1 mile of the project area. Thus, no direct, indirect, or cumulative effects to common loons would be expected to occur as a result of either alternative.</p>
<p>Fishers (<i>Martes pennanti</i>)</p> <p>Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian</p>	<p>The proposed activities would occur in 4 acres of suitable fisher habitat. The proposed activities would reduce canopy cover, but suitable structural attributes would be retained to provide habitat for fishers post-harvest. Thus considering, the small 4-acre area that would be affected by the activities, that suitable structural attributes would be retained, and that the activities would occur for approximately 5 months; negligible adverse direct, indirect, or cumulative effects to fisher would be anticipated.</p>
<p>Flammulated owls (<i>Otus flammeolus</i>)</p> <p>Habitat: Late-successional ponderosa pine and Douglas-fir forest</p>	<p>The project area contains 2 acres of preferred flammulated owl cover types. The proposed activities would occur across a small area and for a short duration; thus negligible direct, indirect or cumulative effects to flammulated owls would be anticipated.</p>
<p>Gray wolves (<i>Canis lupus</i>)</p> <p>Habitat: Ample big game populations, security from human activities</p>	<p>The proposed activities would occur within 2 miles of the 2011 home range of the Corona Pack (<i>MFWP wolf pack data, 2011</i>). However, the proposed activities are not anticipated to adversely affect big game and would occur for approximately 5 months. There are no known wolf rendezvous or den sites in the project area. However, if documented in the vicinity of the project area, mechanized activities would be restricted within 1 mile of wolf dens (<i>ARM 33.11.430(1)(a)</i>) and 0.5 miles of wolf rendezvous sites (<i>ARM 33.11.430(1)(b)</i>). Thus, negligible direct, indirect or cumulative effects to gray wolves would be anticipated.</p>
<p>Harlequin ducks (<i>Histrionicus histrionicus</i>)</p> <p>Habitat: White-water streams, boulder and cobble substrates</p>	<p>No suitable high-gradient stream habitat occurs within 0.5 miles of the project area. Thus, no direct, indirect or cumulative effects to harlequin ducks would be anticipated.</p>
<p>Northern bog lemmings (<i>Synaptomys borealis</i>)</p> <p>Habitat: Sphagnum meadows, bogs, fens with thick moss mats</p>	<p>No suitable sphagnum bogs or fens occur in the project area. Thus, no direct, indirect, or cumulative effects to northern bog lemmings would be expected to occur as a result of either alternative.</p>
<p>Peregrine falcons (<i>Falco peregrinus</i>)</p> <p>Habitat: Cliff features near open foraging areas and/or wetlands</p>	<p>No suitable cliffs/rock outcrops for nest sites were observed during field tours of the area. Additionally, peregrine eyries have not been documented within 0.5 miles of the project area (<i>MNHP data, Dec. 14, 2012</i>). Thus, no direct, indirect, or cumulative effects to peregrine falcons would be anticipated as a result of either alternative.</p>
<p>Pileated woodpeckers (<i>Dryocopus pileatus</i>)</p> <p>Habitat: Late-successional ponderosa pine and larch-fir forest</p>	<p><b>Detailed Analysis Provided Below</b> – The project area contains 82 acres of suitable pileated woodpecker habitat.</p>



Townsend's big-eared bats ( <i>Plecotus townsendii</i> )  Habitat: Caves, caverns, old mines	No suitable caves or mine tunnels are known to occur in the project area. Thus, no direct, indirect or cumulative effects to Townsend's big-eared bats would be expected to occur as a result of either alternative.
<b>BIG GAME</b>	
Elk ( <i>Cervus canadensis</i> )	The proposed units occur in elk and white-tailed deer winter range as identified by DFWP (2008). The proposed harvest unit consists primarily of 40-50% canopy cover that likely provides limited thermal cover for big game and evidence of winter browse was not observed during site visits. The proposed activities would remove disease affected trees, reducing canopy cover by approximately 5-10%. Regenerating conifers that provide visual screening for big game would be protected. Thus, considering the low capacity of the area to provide thermal cover, the low amount of canopy cover that would be removed, and that regenerating conifers would be retained, negligible adverse direct, indirect or cumulative effects to big game are anticipated.
Mule Deer ( <i>Odocoileus hemionus</i> )	
White-tailed Deer ( <i>Odocoileus virginianus</i> )	

### **PILEATED WOODPECKER**

**Issue:** *The proposed activities could reduce tree density and alter the structure of mature forest stands, which could reduce habitat suitability for pileated woodpeckers.*

#### **Introduction**

Pileated woodpeckers require mature forest stands with large dead or defective trees for nesting and foraging. The density of pileated woodpeckers is positively correlated with the amount of dead and/or dying wood in a stand (McClelland 1979) and the diet of pileated woodpeckers consists primarily of carpenter ants, which inhabit large downed logs, stumps, and snags. Cavities created by pileated woodpeckers are ecologically important and are often used in subsequent years by a variety of wildlife species for nesting and roosting. Pileated woodpeckers prefer to nest in ≥20 inch dbh western larch, ponderosa pine, cottonwood, or quaking aspen. Forest management considerations for pileated woodpeckers include retaining dense patches of old and mature coniferous forest with abundant large snags and coarse-woody debris.

#### **Analysis Areas**

The analysis area for direct and indirect effects is the 641-acre project area (FIGURE W-1 –ANALYSIS AREAS). The analysis area for cumulative effects is the 5,155-acre CEAA. The CEAA is centered on the project area and defined according to geographic features (i.e., ridgelines) and provides a reasonable analysis area for pileated woodpeckers that could be influenced by project-related activities. This scale provides a sufficient area to support multiple pairs of pileated woodpeckers (Bull and Jackson 1995).

#### **Analysis Methods**

Analysis methods include field evaluation, aerial photograph interpretation, and GIS analysis of available habitats. SLI data were used to identify preferred pileated woodpecker habitat (ARM 36.11.403(58)). To assess potential pileated woodpecker habitat on DNRC-managed lands, sawtimber stands ≥100 years old within preferred pileated cover types (ARM 36.11.403(58)) with ≥40% or greater canopy closure were considered potential pileated woodpecker habitat. On non-DNRC lands, the stands considered potential suitable habitat for pileated woodpeckers were mature forest stands (≥40% canopy cover, >9 inches dbh average) below 6,000 feet elevation. Factors considered in the analysis include: 1) the degree of harvesting and 2) the structure of pileated woodpecker preferred habitat types.

#### **Existing Conditions**

The project area contains 411 acres (64.1% of project area) of suitable pileated woodpecker habitat. This habitat is composed primarily of ponderosa pine and mixed conifer stands. The remaining acres in the project area consist of stands with low stocking of mature trees, as well stands that are not suitable forest types. Snag

availability in the project is likely low due to the accessibility of the project area to firewood cutters (5.1 miles/square mile open road density).

The CEAA contains 2,480 acres (48.1% of CEAA) of potential pileated woodpecker habitat, which includes 1,485 acres of DNRC-managed pileated woodpecker habitats and 995 acres of mature forested habitat (<6,000 feet elevation) on other ownerships. Open road density in the CEAA is moderate (3.0 miles/square mile) and provides accessibility for firewood cutting. Considering open road density, snags and coarse-woody debris are likely limited in the CEAA.

## **Environmental Effects**

### ***Direct and Indirect Effects of the No-Action Alternative on Pileated Woodpeckers***

Timber harvest would not occur in DNRC-managed pileated woodpecker habitats that occur in the project area. Thus, since no change in the structure of pileated woodpecker habitat would occur, no direct or indirect effects to pileated woodpecker habitat suitability would be anticipated as a result of the No-Action Alternative.

### ***Direct and Indirect Effects of the Action Alternative on Pileated Woodpeckers***

The proposed activities would occur in 80 acres (19.5%) of the 411 acres of pileated woodpecker habitat available in the project area. The proposed harvest would open stands to <30-40% canopy cover in 69 acres; thus, the vegetation structure would become unsuitable for appreciable use by pileated woodpeckers. Snags are not likely to be affected by the proposed harvest, but at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh or the next largest size class) would be retained (*ARM 36.11.411*). Disturbance associated with harvesting could adversely affect pileated woodpeckers on portions of the project area for up to 5 months, should they be present in the project area. Thus, since: 1) forest structural changes would occur, but mitigation would include retention of snags and coarse woody debris (*ARM 36.11.411*, *ARM 36.11.414*); and 2) harvesting would reduce pileated woodpecker suitable habitat availability by 69 acres (16.7%) within the project area; minor adverse direct and indirect effects to pileated woodpecker habitat suitability in the project area would be anticipated as a result of the Action Alternative.

### ***Cumulative Effects of the No-Action Alternative on Pileated Woodpeckers***

None of the proposed forest management activities would occur. Ongoing and proposed forest management projects within the CEAA could change pileated woodpecker habitat availability. Thus, since no change in the structure of pileated woodpecker habitat would occur, no additional cumulative effects to pileated woodpecker habitat suitability would be anticipated as a result of the No-Action Alternative.

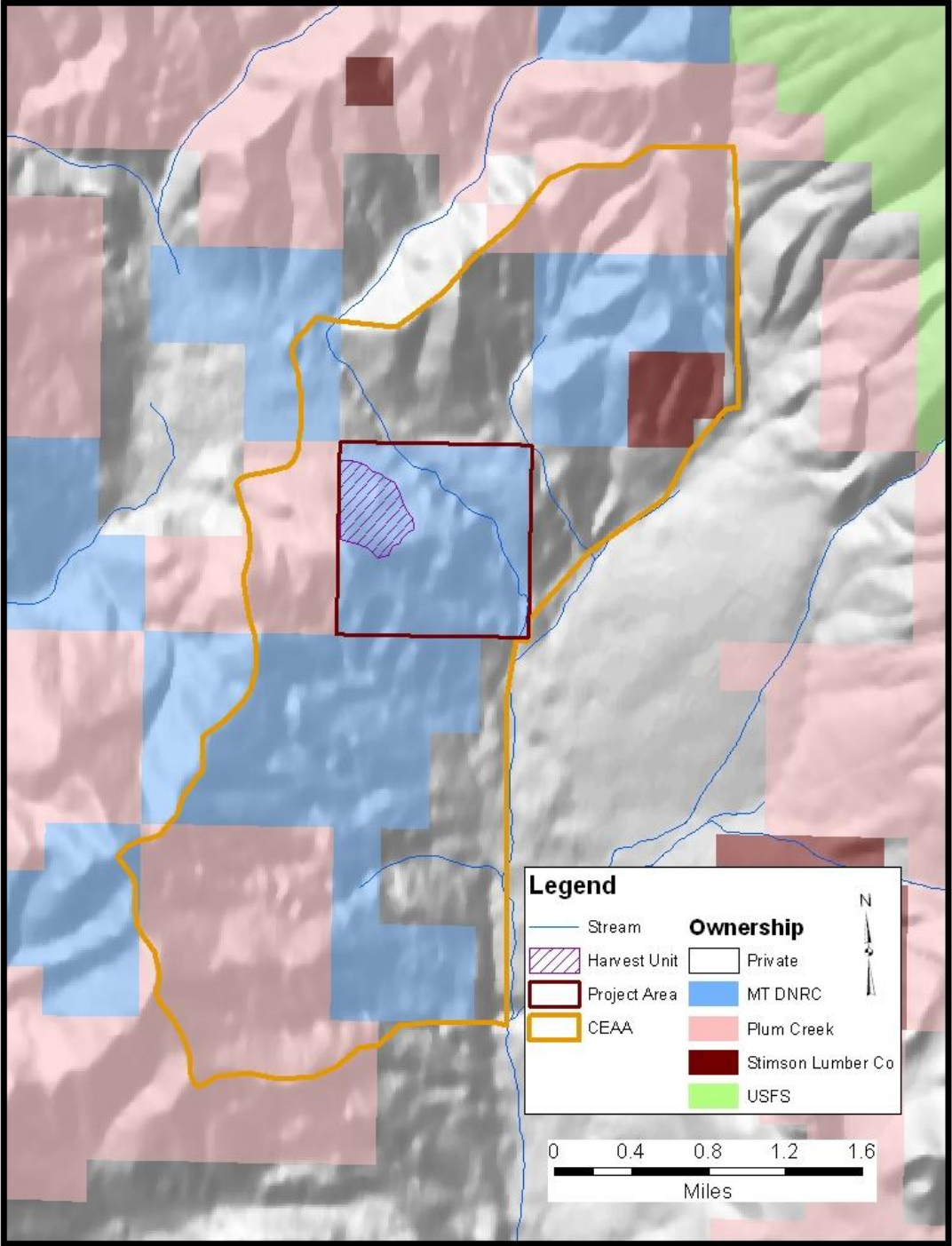
### ***Cumulative Effects of the Action Alternative on Pileated Woodpeckers***

The proposed activities would occur in 80 acres (3.2%) of the 2,480 acres of potential pileated woodpecker habitat in the CEAA. The proposed activities would open stands to 30-40% canopy cover in 69 acres, causing habitat structure to become unsuitable for pileated woodpecker use. Snags are not likely to be affected by the harvest, but at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh or the next largest size class) would be retained (*ARM 36.11.411*). Changes in pileated woodpecker habitat suitability would be additive to recent and ongoing timber sales in the CEAA (see **ANALYSIS METHODS** section of the Introduction). Disturbance associated with the Upper Lynch MToe Timber Sale could adversely affect pileated woodpeckers for up to 5 months. Thus, since: 1) structural changes would occur, but mitigation would include retention of snags and coarse woody debris; and 2) harvesting would reduce pileated woodpecker suitable habitat availability by 69 acres (2.8%) within the CEAA; minor adverse cumulative effects to pileated woodpecker habitat suitability would be anticipated as a result of the Action Alternative.

## **LIST OF MITIGATIONS**

- If a threatened or endangered species is encountered, consult a DNRC biologist and develop additional mitigations that are consistent with the Forest Management Rules for managing threatened and endangered species (*ARM 36.11.428* through *36.11.435*).
- Retain visual screening along roads for big game security where it occurs.
- Manage for snags, snag recruits, and coarse woody debris. Emphasize the retention of downed logs ≥15 inches dbh where they occur as per LY-HB2 (*USFWS and DNRC 2010*).

**FIGURE W-1 –ANALYSIS AREAS.** Wildlife analysis areas for the proposed Upper Lynch MToe Timber Sale.



## **Attachment III**

### **Prescriptions**

# Proposed Upper Lynch MToe Timber Sale Harvest Unit

## Prescriptions

**Harvest Unit:** 1

**Harvest Unit Acres:** 86 acres

**Elevation:** 3600 ft.

**Slope:** 5-25 %

**Aspect:** North East

**Habitat Type:** ABGR/LIBO

**Current Cover Type:** Ponderosa Pine

**Desired Future Condition:** Western larch/Douglas fir

**Soil Type:** Backroad gravelly silt loam

- **Description of Existing Stand:** This unit is located mostly in the northwest quarter of the Section 14, Township 21 North, Range 26 West. The unit is comprised of one identified stand in the Stand Level Inventory. The topography is sloped ranging from 5-25%. The majority of the timber is 100-150 years old with 20 year old Grand fir and Douglas fir regeneration has created an uneven-aged, two story stand. The overstory is comprised mainly of Douglas fir and western larch with scattered ponderosa pine. Overstory canopy cover ranges from averages approximately 40-45% cover with scattered openings from past logging operations. Average tree diameter is 15" dbh and averages 90 feet in height. Mistletoe occurs occasionally in the western larch it is prevalent in the Douglas-fir overstory along with root and stem rot diseases. The understory is fairly thick and somewhat patchy mainly grand fir and Douglas fir ranging from 4-10 feet in height. Surface fuel loading of down material varies from 0-20 tons per acre.

### **Treatment Objectives:**

- Remove trees expressing mistletoe infestation and trees with root disease as well as those with poor vigor, from the overstory to promote long-term forest health.
- Salvage trees felled during DNRC saw training exercises.
- Thin intermediate and understory components of stand to enhance growth characteristics and reduce fuel loading.
- Promote natural ponderosa pine and western larch regeneration in areas where Douglas-fir is becoming dominant component in the stand.

### **Prescribed Treatment:**

- Selection harvest of diseased trees, favor leaving healthy trees with good crown and bark characteristics on a variable spacing leaving 30-60 TPA. Leave ponderosa pine and western larch, then Douglas-fir in that order.
- Create openings of 100' on at least two sides of existing clumps or isolated individual ponderosa pine and western larch overstory trees in the areas where Douglas fir is the predominant species.
- Retain at least two snags per acres >21" DBH and two snag recruits per acre to remain standing if they are not a safety hazard.

### **Harvest Method:**

- Tractor logging with conventional, mechanical, or cut-to-length operations are applicable to this unit.
- Return skid the majority of slash or in woods processing.
- Trees marked to cut.

**Hazard Reduction:**

- Pile and burn at landings following harvest.
- Slash would be lopped and /or trampled to a depth of 18" or less.
- Machine pile and burn all slash in excess of retention requirements of 5 to 10 tons per acre.

**Regeneration/Site Preparation:**

- Precommercial thin understory to promote future growth and vigor.
- Monitor success of natural regeneration and plant seedlings if necessary.

**Anticipated Future Treatments:**

- Stand conditions would be monitored for future salvage opportunities related to insect and disease outbreaks, severe weather events, fire or other unanticipated circumstances on a case-by-case basis.
- This stand would be evaluated for regeneration, planting needs and possible precommercial thinning opportunities as the stand progresses in age.

## **Attachment IV**

### **Consultants and References**

## Preparers

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